

What is claimed is:

1. An apparatus, comprising:
a piston having a longitudinal centerline and a first end, said piston having a circumferential sidewall portion and a bottom wall portion defining a combustion bowl within said piston at said first end, said sidewall portion including a sharp edge at said first end of the piston and a substantially rounded lip spaced axially from said sharp edge, wherein the combustion bowl defined at said sharp edge is round and said rounded lip is closer to said centerline than said sharp edge is to said centerline.
2. The apparatus of claim 1, wherein said first end has an annular surface and said sharp edge limits a fuel from passing out of said combustion bowl and onto said annular surface.
3. The apparatus of claim 1, wherein said first end has an annular surface and said sharp edge limits a fuel from passing out of said combustion bowl and across said annular surface.
4. The apparatus of claim 1, wherein said substantially rounded lip is located between said bottom wall portion and said sharp edge, and wherein said substantially rounded lip overhanging a portion of said combustion bowl.

5. The apparatus of claim 1, wherein said sidewall portion including an upwardly flared portion located between said sharp edge portion and said rounded lip portion.

6. The apparatus of claim 5, wherein said sidewall portion including an upstanding wall portion located between said sharp edge and said upwardly flared portion.

7. The apparatus of claim 6, wherein said upstanding wall portion is substantially parallel with said longitudinal centerline.

8. The apparatus of claim 1 wherein said combustion bowl is substantially symmetrical about said longitudinal centerline;
wherein said substantially rounded lip is located between said bottom wall portion and said sharp edge, and wherein said substantially rounded lip overhanging a portion of said combustion bowl; and

wherein said sidewall portion including an upwardly flared portion located between said sharp edge portion and said rounded lip portion.

9. The apparatus of claim 9, wherein said sidewall portion including an upstanding wall portion located between said sharp edge and said upwardly flared portion.

10. The apparatus of claim 9, wherein said first end has an outer annular surface and said sharp edge limits a fuel from passing out of said combustion bowl and onto said annular surface.

11. The apparatus of claim 1, wherein said piston is formed of a material that can withstand the temperatures and pressures associated with a combustion chamber of an internal combustion engine.

12. The apparatus of claim 1, wherein said combustion bowl is substantially symmetrical about said longitudinal centerline;

wherein said substantially rounded lip is located between said bottom wall portion and said sharp edge, and wherein said substantially rounded lip overhanging a portion of said combustion bowl;

wherein said sidewall portion including an upwardly flared portion located between said sharp edge portion and said rounded lip portion;

wherein said sidewall portion including an upstanding wall portion located between said sharp edge and said upwardly flared portion; and

wherein said first end has an outer annular surface and said sharp edge limits a fuel from passing out of said combustion bowl and along said annular surface.

13. The apparatus of claim 12, wherein said piston is formed of a material that can normally withstand the temperatures and pressures associated with a combustion chamber of an internal combustion engine.

14. An apparatus, comprising:
a piston body having a longitudinal centerline and a first end surface, said piston body having a combustion bowl defined therein with an entrance adjacent said first end surface, said piston body having a sharp edge portion at said entrance for directing a fuel exiting said combustion bowl away from said first end surface and a rounded portion for receiving a fuel thereon within said combustion bowl, said rounded portion is located closer to said longitudinal centerline than said sharp edge portion is located to said centerline and wherein said entrance is round.

15. The apparatus of claim 14, wherein said piston body has an outer circumferential surface, and wherein said sharp edge portion is located radially inward of said outer circumferential surface; and wherein said combustion bowl is symmetrical about said longitudinal centerline.

16. The apparatus of claim 14, wherein said sharp edge portion directing the fuel exiting the combustion bowl in a direction approximately parallel with said centerline.

17. The apparatus of claim 14, wherein said rounded portion and said sharp edge portion extending circumferentially around said combustion bowl.

18. The apparatus of claim 17, wherein said piston body having a bottom surface defining a portion of said combustion bowl, and wherein said rounded portion is located between said bottom surface and said sharp edge portion;

19. The apparatus of claim 18, wherein said piston body having an upwardly flared portion defining a portion of said combustion bowl, and wherein said upwardly flared portion is located between said rounded portion and said sharp edge portion.

20. The apparatus of claim 14, wherein said piston body has an outer circumferential surface; wherein said sharp edge portion is located radially inward to said outer circumferential surface; wherein said combustion bowl is symmetrical about said longitudinal centerline, wherein said piston body having a bottom surface defining a portion of said combustion bowl, and wherein said rounded portion is located between said bottom surface and said sharp edge portion; wherein said piston body having an upwardly flared portion defining a portion of said combustion bowl, and wherein said upwardly flared portion is located between said rounded portion and said sharp edge portion; and wherein said rounded portion, said sharp edge portion and said upwardly flared portion extend circumferentially around said bowl.

21. The apparatus of claim 20, wherein said piston is formed of a material that can withstand the temperatures and pressures associated with a combustion chamber of an internal combustion engine.

22. An apparatus, comprising:
a piston body having a longitudinal centerline and a first end, said piston body having a circumferential sidewall portion and a bottom wall portion defining a combustion bowl within said piston, said combustion bowl having a substantially round entrance at said first end, said sidewall portion including fuel directing means at said entrance for directing a fuel leaving said combustion bowl away from said first end and fuel receiving means for receiving a fuel within said combustion bowl, wherein said fuel directing means is located a first distance from said centerline and said fuel receiving means is located a second distance from said centerline, and wherein said first distance is greater than said second distance.

23. The apparatus of claim 22, wherein at least a portion of said fuel receiving means overhanging a portion of said combustion bowl;
wherein said combustion bowl is symmetrical about said longitudinal centerline;
wherein said piston body includes a flared portion between said fuel directing means and said fuel receiving means.

24. The apparatus of claim 23, wherein said fuel directing means, said fuel receiving means and said flared portion extending circumferentially around said combustion bowl.